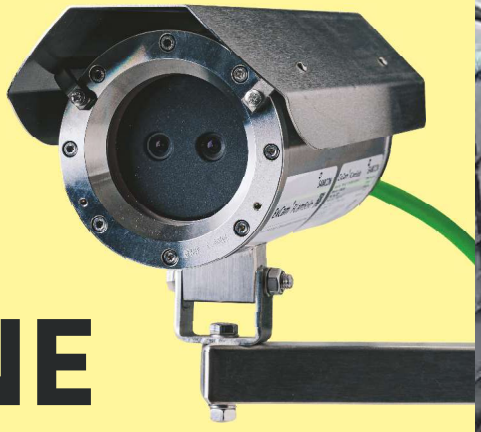
CIQURIX

IN THE ZONE



Fire detection in explosive atmospheres at a hazardous treatment recovery facility

SUMMARY

As part of the circular economy it is important to recover products and extract value wherever possible, whilst responsibly handling hazardous materials that have reached the end of their service life. As part of the redevelopment of a chemical waste facility, a reliable early-detection fire system was required that could operate safely in ATEX restricted areas and trigger automatic suppression.

CHALLENGE

The £1.2M redevelopment and expansion project saw the capacity of the facility expanded to more than 900 tonnes of storage, along with a substantial increase to more than 800 types of accepted waste. Many of the new buildings are party or fully open-sided, making traditional fire detection ineffective. Each building was given a waste-type designation and an associated fire risk level, as well as a defined ATEX (explosive atmospheres) zoning. Fixed fire suppression was required for certain buildings, which would need to be automatically triggered by the fire detection system. Rapid detection of confirmed fire was required, coupled with minimised false alarm potential.

SOLUTION

The consultants contracted to design the redevelopment project researched potential solutions, including traditional flame detection and thermal cctv cameras. The Ciqurix CORE system was chosen because it detects fire rather than the byproducts of combustion (which can be confused with benign stimuli). It doesn't respond to heat, dust, fumes or steam. The sensitivity can be adjusted in different areas of the image, and complex cause and effect is possible, providing flexible linking to the fire system and suppression control system. Because it is designed to comply with BS5839-1, it forms part of the prescribed fire detection system and can be used to satisfy insurance requirements.

RESULTS

Six XFP video flame detectors, four EXFP video flame detectors, a CORE Control Hub and a a CORE Extension Hub were installed, linked to the site fire suppression system and fire warning system, both of which are monitored off-site. The system also provides a live video feed from each detector to the site staff, accessible from their PCs and mobile devices. The system is performing well, and the insurer and Environment Agency are both satisfied.

SYSTEM DESIGNED & COMMISSIONED TO BS5839-1:2017

ACCEPTED BY ENVIRONMENT AGENCY

FULLY INTEGRATED WITH COMPANY CONTROL ROOM

INSURANCE COMPANY SATISFIED